



A.D. 1872, 12th AUGUST. N° 2402.

SPECIFICATION

OF

JAMES NEWTON AND WILLIAM PRICE.

CONSUMING SMOKE AND ECONOMIZING
FUEL.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SCOTTISWOODE

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25, SOUTHAMPTON BUILDINGS, HOLBORN.

1872.



A.D. 1872, 12th AUGUST. N° 2402.

Consuming Smoke and Economizing Fuel.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by James Newton and William Price at the Office of the Commissioners of Patents, with their Petition, on the 12th August 1872.

We, JAMES NEWTON, of New Wortley, in the Borough of Leeds, in
5 the County of York, Flour Mill Manager, and WILLIAM PRICE, of
Hunslet, in the Borough of Leeds aforesaid, Mechanic, do hereby declare
the nature of the said Invention for, "IMPROVEMENTS IN THE MEANS OF
AND APPARATUS FOR CONSUMING SMOKE AND ECONOMIZING FUEL," to be as
follows :—

10 The object of this Invention is to effect the total or partial consump-
tion of smoke and gases arising and produced in furnaces or fire-places
used in manufactories, warehouses, shops, or dwelling-houses. This
effected by causing the smoke and gases to be driven from the flue back
again through the fire or fires or burning masses, and there reburnt,
15 consumed, or partially or wholly reburnt or consumed. To this end
flues, pipes, or conductors of brick, stone, iron, or earthen or other
materials of any other suitable kind are adapted to the ordinary flue of
the furnace or fire-place, and the smoke or gases are drawn into their

Newton & Price's Impts. in Apparatus for Consuming Smoke, &c.

additional flue or flues, and forced again on to or in contact with the ignited fuel.

By thus effectually burning all the combustibile matters and gases a great saving in the coal or other fuel is obtained at the same time that the smoke, sulphur, and other vapours and nuisances emitted from 5 chemical and other works which might adopt the Invention will be abated.

The return flues having been conveniently arranged according to the position and construction of the furnace a rotary exhausting fan is adapted to the end of the flue so that it will draw off the combustibile 10 gases and smoke from the furnace flue and force them back into the ash-pit of the furnace or fire-place again, thus keeping up a sufficient draught to consume the fuel.

In carrying out our Invention we make use of a small donkey engine fixed on the boiler or on suitable masonry to drive the exhaust fan, but 15 if other power is available it may be used instead of the small engine.

The return flue is also connected with the chimney, so that in the event of any derangement of the smoke-consuming apparatus the furnace or fire-place may be made to act in the usual manner, for which purpose the flue is provided with a damper to open and close the 20 communication with the chimney at pleasure.

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Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1873.